



Evaluating a Culturally Adapted, School-Based Nutrition Education Programme: The Impact of Local Comic Books on Adolescent Fruit and Vegetable Consumption in Lagos, Nigeria

Chinelo Okonkwo^{1,2}, Adebayo Adeyemi^{3,4}

¹ Department of Epidemiology, Bayero University Kano

² Department of Surgery, University of Lagos

³ Department of Pediatrics, Bayero University Kano

⁴ Department of Public Health, University of Lagos

Published: 23 February 2024 | **Received:** 19 September 2023 | **Accepted:** 02 January 2024

Correspondence: cokonkwo@hotmail.com

DOI: [10.5281/zenodo.18543441](https://doi.org/10.5281/zenodo.18543441)

Author notes

Chinelo Okonkwo is affiliated with Department of Epidemiology, Bayero University Kano and focuses on Medicine research in Africa.

Adebayo Adeyemi is affiliated with Department of Pediatrics, Bayero University Kano and focuses on Medicine research in Africa.

Abstract

Low fruit and vegetable consumption among adolescents in Nigeria is a significant public health concern. School-based nutrition education is a recognised strategy, but its effectiveness may be limited by a lack of cultural relevance. This study evaluated the impact of a culturally adapted, school-based nutrition education programme, which used locally developed comic books, on fruit and vegetable consumption among adolescents in Lagos, Nigeria. A quasi-experimental design was employed. Four public secondary schools were purposively selected and assigned to intervention or control groups. Participants were adolescents aged 13-17 years. The intervention group received a six-week nutrition education programme delivered by trained teachers, using comic books featuring local characters and settings. The control group received the standard curriculum. Fruit and vegetable intake was assessed using a validated food frequency questionnaire at baseline and immediately post-intervention. Data were analysed with descriptive and inferential statistics. Post-intervention, the mean daily fruit and vegetable consumption in the intervention group increased significantly from 1.8 to 3.2 servings, while no significant change was observed in the control group. A significantly higher proportion of adolescents in the intervention group (68%) met the minimum recommended daily intake post-intervention compared to the control group (22%). The culturally adapted nutrition education programme using local comic books significantly improved fruit and vegetable consumption among adolescents in Lagos. This underscores the value of integrating locally relevant materials into school health promotion. Nutrition education programmes for adolescents should incorporate culturally adapted materials, such as locally developed comic books. Policymakers and educators should consider integrating this approach into the school health curriculum, supported by appropriate teacher training. nutrition education, adolescents, fruit and vegetable consumption, comic books, cultural adaptation, school-based intervention, Nigeria This study provides evidence for the effectiveness of a culturally relevant, comic book-based

nutrition education programme in a Nigerian adolescent population, contributing to the literature on feasible strategies for improving dietary behaviours in schools.

Keywords: *nutrition education, adolescent health, Sub-Saharan Africa, fruit and vegetable consumption, school-based intervention, health promotion, cultural adaptation*

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ **REQUEST FULL PAPER**

Email: info@parj.africa

Request your copy of the full paper today!

SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.

Submit at: app.parj.africa



Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge